CLAIMS

1. A method for producing a particulate alumina, comprising heat-treating (calcining) a composition comprising alumina, an alumina hydrate, ammonium chloride and a halogen compound other than ammonium chloride and then disintegrating the heat-treated product.

2. The production method of a particulate alumina as claimed in claim 1, wherein the halogen compound other than ammonium chloride is a fluorine compound or a boron-fluorine compound.

3. The production method of a particulate alumina as claimed in claim 2, wherein the fluorine compound is at least one member selected from the group consisting of AlF_3, NaF, CaF_2, MgF_2 and Na_3AlF_6.

4. A method for producing a particulate alumina, comprising heat-treating (calcining) a composition comprising alumina, an alumina hydrate, ammonium chloride and a boron compound and then disintegrating the heat-treated product.

5. A method for producing a particulate alumina, comprising heat-treating (calcining) a composition comprising alumina, an alumina hydrate, ammonium chloride, a halogen compound other than ammonium chloride, and a boron compound then disintegrating the heat-treated product.

6. The production method of a particulate alumina as claimed in claim 4 or 5, wherein the boron compound is at least one member

selected from the group consisting of B_2O_3, H_3BO_3, $mNa_2O \cdot nB_2O_3$ (m and n each represents an integer of 1 or more, hereinafter the same) and a boron-fluorine compound.

7. The production method of a particulate alumina as claimed in any one of claims 1 to 6, wherein the particulate alumina has a rounded shape having no cutting edge.

8. The production method of a particulate alumina as claimed in any one of claims 1 to 7, wherein the composition is previously granulated before heat-treating (calcining) the composition.

9. The production method of a particulate alumina as claimed in any one of claims 1 to 8, wherein the alumina hydrate is at least one member selected from the group consisting of an aluminum hydroxide, an alumina gel and a partially hydrated aluminum compound.

10. The production method of a particulate alumina as claimed in any one of claims 1 to 9, wherein the average particle size of the particulate alumina is 10 μm or less.

11. The production method of a particulate alumina as claimed in claim 10, wherein the average particle size of the particulate alumina is from 0.3 to 8 μm.

12. A resin composition comprising a particulate alumina produced by the production method as claimed in any one of claims 1 to 11, and a polymer compound.

13. The resin composition as claimed in claim 12, wherein the polymer compound is at least one member selected from an aliphatic resin, an unsaturated polyester resin, an acrylic resin, a methacrylic resin, a vinyl ester resin, an epoxy resin and a silicone resin.

14. The resin composition as claimed in claim 12 or 13, wherein the content of the particulate alumina is 70 mass% of more.

15. The resin composition as claimed in any one of claims 12 to 14, wherein the particulate alumina is coated with a surface-treating agent.

16. The resin composition as claimed in claim 15, wherein the surface-treating agent is a silane coupling agent.

17. The resin composition as claimed in claim 15, wherein the surface-treating agent is a compound having any one or more group selected from the group consisting of an amino group, a carboxyl group and an epoxy group.

18. The resin composition as claimed in claim 15, wherein the surface-treating agent is a modified silicone oil.

19. The resin composition as claimed in any one of claims 15 to 18, wherein the coverage of the surface-treating agent is from 0.05 to 5 mass% based on the particulate alumina.

20. A ceramic composition comprising a particulate alumina produced by the production method as claimed in any one of claims

1 to 11.

21. An electronic component or semiconductor device comprising the resin composition as claimed in any one of claims 12 to 19.

22. A CPU or PDP comprising the resin composition as claimed in any one of claims 12 to 19.

23. A peripheral equipment for batteries, or a peltier element, an inverter or a power transistor, comprising the resin composition as claimed in any one of claims 12 to 19.